1.1 Scope.

This specification covers the detail requirements for a unity-gain differential amplifier. It is highly recommended that this data sheet be used as a baseline for new military or aerospace specification control drawings.

1.2 Part Number.

The complete part number per Table 1 of this specification is as follows:

Device	Part Number	Package
−1	AMP-03BJ/883	J

1.2.3 Case Outline.

Letter	Case Outline (Lead Finish Per MIL-M-38510)
J	8-Lead Metal Can (TO-99)

1.3 Absolute Maximum Ratings. (T_A = +25°C unless otherwise noted)

Supply Voltage	±18 V
Input Voltage	Supply Voltage
Output Short Circuit Duration	Continuous
Operating Temperature Range	−55°C to +125°C
Storage Temperature Range	−65°C to +150°C
Lead Temperature Range (Soldering 60 sec)	+300°C
Junction Temperature Range (T_J)	−65°C to +150°C

1.5 Thermal Characteristics.

Thermal Resistance, TO-99 (J) Package:
Junction-to-Case (θ_{JC}) = 18°C/W max
Junction-to-Ambient (θ_{JA}) = 103°C/W max

AMP-03—SPECIFICATIONS

Table 1.

Test	Symbol	Group A Subgroups	Limits Min	Limits Max	Test Condition[1]	Unit
Input Offset Voltage	V_{OS}	1	−700	+700	V_{CM} = 0 V; T_A = +25°C	μV
		2, 3	−1500	+1500	V_{CM} = 0 V; T_A = −55°C, +125°C	
Gain Error	GE	1		0.008	No Load, V_{IN} = ±10 V; T_A = +25°C	%
		2, 3		0.02	No Load, V_{IN} = ±10 V; T_A −55°C, +125°C	
Input Voltage Range[2]	IVR	1	±10		T_A = +25°C	V
		2, 3	±10		T_A = −55°C, +125°C	
Common-Mode Rejection	CMR	1	80		V_{CM} = ±10 V; T_A = +25°C	dB
		2, 3	75		V_{CM} = ±10 V; T_A = −55°C, +125°C	
Power Supply Rejection	PSRR	1		10	V_S = ±6 V to ±18 V; T_A = +25°C	μV/V
		2, 3		20	V_S = ±6 V to ±18 V; T_A = −55°C, +125°C	
Output Swing	V_O	4	±12		R_L = 2 kΩ; T_A = +25°C	V
		5, 6	±12		R_L = 2 kΩ; T_A = −55°C, +125°C	
Short Circuit Output Current Limit	I_{SC}	1	45	−15	Output Shorted to Ground; T_A = +25°C	mA
		2, 3	45	−15	T_A = −55°C, +125°C	
Slew Rate	SR	7	6		R_L = 2 kΩ, T_A = +25°C	V/μs
Supply Current	I_{SY}	1		3.5	No Load; T_A = +25°C	mA
		2, 3		4.0	No Load; T_A = −55°C, +125°C	

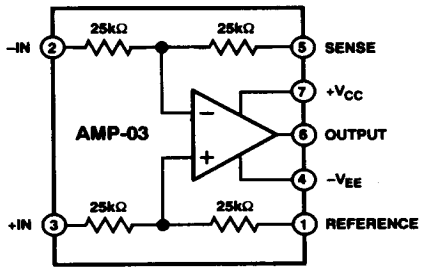
NOTES
[1]V_S = ±15 V, R_S = 50 Ω, V_{CM} = 0 V.
[2]IVR guaranteed by CMR test.

Table 2. Electrical Test Requirements for Class B Devices

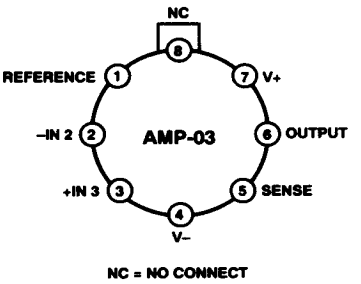
MIL-STD-883 Test Requirements	Subgroups (See Table 1)
Interim Electrical Parameters (Pre Burn-In)	1
Final Electrical Test Parameters	1,* 2, 3, 4, 5, 6
Group A Test Requirements	1, 2, 3, 4, 5, 6, 7

NOTE
*PDA applies to Subgroup 1 only. No other subgroups are included in PDA.

3.2.1 Functional Block Diagram and Terminal Assignments.



TO-99
(J Suffix)



NC = NO CONNECT

3.2.4 Microcircuit Technology Group.

This microcircuit is covered by technology group (49).

4.2.1 Life Test/Burn-In Circuit.

Steady state life test is per MIL-STD-883 Method 1005. Burn-in is per MIL-STD-883 Method 1015 test condition (C).